

Abstract

The present invention provides silica-based reversed-phase HPLC methods that lead to higher retention of the analytes in the column and longer column lifetimes than usually observed under medium to high pH aqueous mobile phase conditions. The
5 inventive methods comprise eluting the HPLC column using an aqueous mobile phase comprising at least one fluorinated additive. Preferred additives are polyfluorinated alcohols such as 2,2,2-trifluoroethanol and 1,1,1,3,3,3-hexafluoroisopropanol. The methods of the present invention may be used for analyzing, separating, purifying, and/or isolating small organic molecules, natural products, as well as biomolecules such as
10 polypeptides, oligonucleotides and polynucleotides (*e.g.*, DNA fragments).